REMARKS

The Examiner objected to claims 13-14 because of informalities, stating "step(d) is followed by step (e) not step (f)." In response, Applicants have amended claim 13 so the last step is labeled (e).

The Examiner rejected claims 1-3, 5, 8, 10 and 12-13 under 35 U.S.C. §102(e) as being unpatentable over Daneman et al. (U.S. 6,764,936 B2).

The Examiner rejected claims 4, 6, 7, 9, 11 and 14 under 35 U.S.C. 103(a) as being unpatentable over Daneman et al. (U.S. 6,764,936 B2).in view of Ferrai et al. (U.S. 6,331,444).

Applicants respectfully traverse the §102(e) and §103(a) rejections with the following arguments.

35 USC § 102

The Examiner rejected claim 1 under 35 U.S.C §102(e) stating "Daneman disclose a device with (a) providing a substrate (204); forming a first single-crystal layer (202) on a top surface of said substrate (204); forming a second single-crystal layer (206) on a top surface of said first single-crystal layer (202); forming one or more devices (220) in said second single-crystal layer (206); forming a trench (208) in said second single-crystal layer (206) to form a single-crystal island containing said one or more devices, said first single-crystal layer (202) exposed in a bottom of said trench (208); (f) removing said first single-crystal layer (202) in order to separate said single-crystal island from said substrate (204) (see Figures 2A-2E)."

Applicants contend that claim 1 is not anticipated by Daneman et al. because Daneman et al. does not teach each and every feature of claim 1.

(1) Daneman et al. does not teach "(b) forming a first single-crystal layer on a top surface of said substrate" as the Examiner alleges. Applicants respectfully point out that Daneman et al. in col. 3 lines 53-67 teaches sacrificial layer 202 is silicon dioxide, silicon nitride, polymer or glass all of which are amorphous and not single-crystalline. Further there is no mention that sacrificial layer 202 is a single-crystal material.

(2) Daneman et al. does not teach "(c) forming a second single-crystal layer on a top surface of said first single-crystal layer" as the Examiner alleges because there is no first single-crystal layer as argued *supra*.

(3) Daneman et al. does not teach "(e) forming a trench in said second-single crystal layer, said trench surrounding said one or more devices, to form a single-crystal island containing said one or more devices in a region of said second single-crystal layer" as Applicants claim 1 requires. Applicants note that the Examiner has failed to identify any element in

Daneman et al. as "a single-crystal island" and have assumed element 230, based on Applicants reading of Daneman et al. *in toto*. Applicants further point out elements 208 of Daneman et al. are vias and that forming vias 208 does not create island 230. Island 230 pre-exists in Daneman et al. and in FIG. 2B Daneman et al. is merely forming via openings through second single-crystal layer 206 that are later filled (in FIG. 2D) with material 220 to form landing pads 224 in island 230. Further, Applicants argue that since sacrificial layer 202 is removed after vias 208 are filled with material 220, single crystal island 230 has to pre-exist with its sidewalls (outermost lefty and right edges of island 230) exposed as a path for the etchant of sacrificial layer 202, otherwise sacrificial layer 202 could not be removed and island 230 detached.

Based on the preceding arguments, Applicants respectfully maintain that claim 1 is not unpatentable over Daneman et al. and is in condition for allowance. Since claims 2-12 depend from claim 1, Applicants respectfully maintain that claims 2-12 are likewise in condition for allowance.

Applicants point out that new claim 27 is identical to original claim 1 as rejected by the Examiner and that the arguments *presented* supra with respect to claim 1 relative to the lack of teaching of the first single-crystal-layer in Daneman et al. is applicable to Applicants claim 1.

As to claim 8, Daneman et al. does not teach "between steps (e) and (f), forming a spacer on peripheral sidewalls of said single crystal island" as Applicants amended claim 8 requires. Applicants respectfully point out that in Daneman et al. FIG. 2E, that while the vias 208 are filled with material 220, the peripheral sidewalls (next to label 230) are left exposed.

As to claim 12, Daneman et al. does not teach "wherein said trench comprises one or more intersecting trenches" as the Examiner alleges. Applicants respectfully point out, that only a top view would disclose "intersecting trenches" (see, for example Applicants FIG. 3) and there are no top views in Daneman et al.

As to claim 13, Applicants maintain the arguments presented *supra* with respect to claim 1 are applicable to claim 13, and thus claim 13 is in condition for allowance. Since claims 13-14 and 21-26 depend from claim 13, Applicants maintain claims 13-14 and 21-26 are likewise in condition for allowance.

35 USC § 103 Rejections

The Examiner has given "facilitate the manufacture of the semiconductor device and increase the speed of the semiconductor structure" as the reason to modify Daneman et al. with Ferrari et al. Applicants can not find any such teaching in Farrai et al. and maintain that the rejection of claims 4, 6, 7, 9-11 and 14 is improper because there is no suggestion in the prior art to combine the references as required by *Karsten Mfg. Corp. v. Cleveland Gulf Co.*, 242 F.3d 1376, 1385, 58 U.S.P,Q.2d 1286, 1293 (Fed. Cir. 2001) which states " In holding an invention obvious in view of a combination of references, there must be some suggestion, motivation, or teaching in the prior art that would have led a person of ordinary skill in the art to select the references and combine them in the way that would produce the claimed invention." Applicants contend the alleged motivation does originate from prior art but has been supplied by the Examiner. Therefore, the Examiner has not established his prima facie case of obviousness.

The Examiner has indicated *In re Leshin* as a basis for the 35 USC 103(a) rejections, but has not provided the full citation. Without the full citation Applicants are unable to fully respond. Applicants respectfully request the Examiner supply the full citation so Applicants can review it applicability to the 35 USC 103(a) rejections.

As to claim 4, Ferrari et al. does not teach "wherein said first single-crystal layer comprises Si_xGe_y, Si_xC_y or Si_xAs_y" as the Examiner alleges is missing from Daneman et al. but is supplied by Ferrai et al. Applicants can find no teaching of "Si_xGe_y, Si_xC_y or Si_xAs_y" or of these layers being "single-crystal"as Applicants claim 4 requires in Ferrari et al. Applicants point out thatFerrai et al. FIG. 11, layer 21 is oxide, layer 23 and 26 are polysilicon.

As to claim 6, Ferrari et al. does not teach "(g) after step (f) repeating steps (a) through (f) one or more times" as the Examiner alleges is missing from Daneman et al. but is supplied by Ferrai et al. Applicants can find no such teaching in Ferrari et al.

As to claim 7, Ferrari et al. does not teach "((g) after step (f) mechanical-chemical-polishing said substrate to expose a new top surface of said substrate; and (h) after step (g) repeating steps (a) through (g) one or more times" as the Examiner alleges is missing from Daneman et al. but is supplied by Ferrai et al. Applicants can find no such teaching in Ferrari et al.

As to claim 9, Ferrari et al. does not teach "wherein said one or more devices are independently selected from the group consisting of NFETS, PFETs, bipolar transistors, resistors and capacitors" as the Examiner alleges is missing from Daneman et al. but is supplied by Ferrai et al. . Applicants fail to find any support for this allegation in Col. 4, lines 24-58 of Ferrai et al. as the Examiner suggests. Further, Applicants can find no such teaching anywhere in Ferrari et al. Applicants point out, Ferrari et al. is teaching micro-mechanical device fabrication and is essentially silent as to semiconductor devices.

As to claim 11, Ferrari et al. does not teach" wherein said integrated circuit is a radio frequency identification circuit" as the Examiner alleges is missing from Daneman et al. but is supplied by Ferrai et al. Applicants can find no such teaching in Ferrari et al.

As to claim 14, Ferrari et al. does not teach "wherein step (b) includes performing an ion implantation of Ge or As or C followed by performing a heat treatment" as the Examiner alleges is missing from Daneman et al. but is supplied by Ferrai et al. Applicants fail to find any support for this allegation in Col. 4, lines 24-58 of Ferrai et al. as the Examiner suggests. Further, Applicants can find no such teaching anywhere in Ferrari et al.

CONCLUSION

Based on the preceding arguments, Applicants respectfully believe that all pending claims and the entire application meet the acceptance criteria for allowance and therefore request favorable action. If Examiner believes that anything further would be helpful to place the application in better condition for allowance, Applicants invite the Examiner to contact the Applicants' representative at the telephone number listed below. The Director is hereby authorized to charge and/or credit Deposit Account 09-0456.

Respectfully submitted,
FOR: Anderson et al.

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